



*science for a changing world*

<http://astrogeology.usgs.gov>

## **Orbit**

30.06 astronomical units (AU) from the Sun  
Earth is 1 AU from the Sun

## **Length of year**

59,800 Earth days = 164.8 Earth years

## **Length of Day**

16.1 Earth hours, or 0.67 Earth days

## **Tilt of Rotation Axis**

28.3 degrees versus 23.5 degrees for Earth

## **Size**

**Diameter:** 3.9 times Earth's diameter

## **Surface Gravity**

1.1 times Earth's gravity  
If you weigh 80 pounds on Earth, you would weigh about 91 pounds on Neptune!

## **Mass**

17.1 times Earth's mass

## **Atmosphere**

**Primary components:** 79% hydrogen, 18% helium, 3% methane

## **Surface**

The gas planets do not have solid surfaces; their gaseous material simply gets denser with depth. What we see when looking at these planets are the tops of clouds high in their atmospheres.

Neptune's composition is probably similar to that of Uranus: various ices and rock with about 15 percent hydrogen and a little helium. Like Uranus, but unlike Jupiter and Saturn, it may not have a distinct internal layering, instead being more or less uniform in composition. But there is most likely a small core (about the mass of the Earth) of rocky material.

## **Moons**

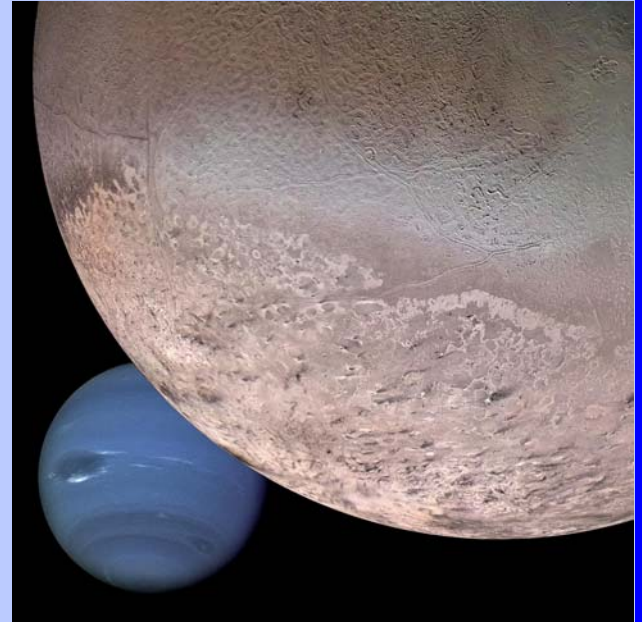
There are 13 known moons: Triton and 7 small named moons, plus 4 discovered in 2002 and 1 discovered in 2003 which have yet to be named (as of July 2004).

## **Past Missions**

Voyager 2 on August 25, 1989. Recent ground-based and Hubble Space Telescope observations have added a great deal of data.

# *Neptune*

Eighth planet from the Sun



USGS/NASA PIA00340

Neptune was the first planet located through mathematical predictions. Johann Galle observed the planet by telescope in 1846. Galle wanted to name the planet for Le Verrier, who had predicted the planet mathematically, but this was not acceptable to the international astronomical community. Neptune is instead named for the Roman god of the sea. Some satellites in the Neptunian system are named for characters from Greek or Roman mythology associated with oceans, seas and rivers.

Wind speeds in Neptune's stormy cloud tops reach hundred of miles per hour. Because of Pluto's irregular orbit, Neptune was thought to be the most distant planet from the Sun between 1979-1999.